

MEMORANDUM

TO: Branch of Sinopec International Petroleum Service Corporation

CC: Site Staff

FROM: SLA

SUBJECT: *Dhahran District Cooling Scheme*
Resubmitted Asphalt Mix Design Approval

MEMO NUMBER: SM-500

DATE: 31-October-2011

REFERENCE: 020842-C6012-60-5518

Attention: Mr. Javed.

With reference to the above mentioned subject and your site Memo No: 537 dated 31st Oct 2011 as revised Submittal for the asphalt mix design, kindly find attached Site Memo No: 221 received from the project Consultant for the returned reviewed submittal as approved.

Sinopec is kindly requested to comply with SA recommendations as listed in Aramco's Review of Asphalt mix Design" memo attached

Best Regards

Maged Aggour

Site Manager (KSA Aramco Dhahran)

SNC Lavalin LLC

maged.aggour@snclavalin.com

Mobile +971 50 6610642 - UAE

Mobile +966 50 4363950 - KSA

www.snclavalin.com

RECEIVED

31 OCT 2011

October 31, 2011

Site Memo No. SM 0421/2011

Mr. Maged Aggour
Site Manager
SNC-LAVALIN
P. O.Box 30851
Al Khobar 31952
KSA

Project: Saudi Dhahran District Cooling Scheme

Subject: Resubmission of Updated Asphalt Mix Design.

Reference: SNC SM – 221 (020842-0005-60-5221) dated 31st October, 2011

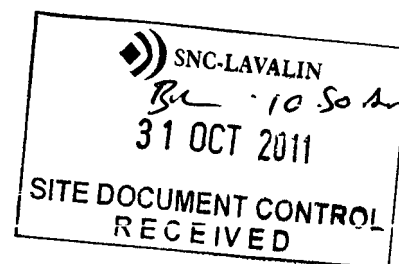
Dear Maged,

Subject submittal of the Al-Osais asphalt mix design has been approved by Aramco to be utilized on this project.

Please refer to the attached letters from Aramco indicating approval which also includes the approved job mix formulas for Class A binder course and Class B & C wearing courses. Contractor must comply with the stated recommendations as listed in Aramco's "Review of Asphalt Mix Design" memo.

With regards,


Kris Gritts
Project Manager



TO: Stanley Consultant MEMO NUMBER: SM-221
CC: DATE: 31st Oct 2011
FROM: SLA REFERENCE: 020842-0005-60-5221
SUBJECT: ***Dhahran District Cooling Scheme – C6012 Package (SINOPEC)***
Resubmission of Updated Asphalt Mix Design.


Dear Kris,

With reference to the above mentioned subject, kindly find attached revised submittal of the asphalt mix design as commented by SA, attached site memo received from the network contractor which is self explanatory.

Appreciating your review and approval of the same at the earliest.

Best Regards

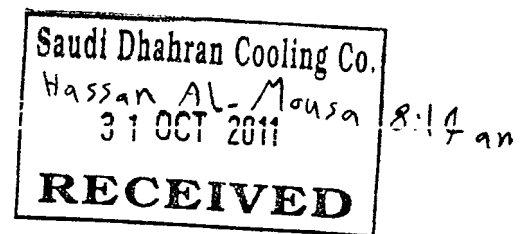
Maged Aggour


Site Manager (KSA ARAMCO Dhahran)
SNC Lavalin LLC
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Mobile +971 50 6610642 - UAE

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UTILITIES DEPARTMENT
Dhahran District Cooling Project Team
Bldg. 9156, Room 128, Dhahran
Tel. # 876-0321; Fax # 872-1559
October 22, 2011

DDCPT: 009/2011

BI-10-00565
DHAHRAN DISTRICT COOLING
CONTRACT # 6600023944
Asphalt Mix Design

Abduljalil Bakhurji, Project Manager
Saudi Dhahran Cooling Company (Saudi Tabreed)
P. O. Box 239
Al-Khobar 31952
Fax: (+966) 3 887-3744


Reference: SDCC-SA-387 Received on Oct 17, 2011
CACPD: 344/2011 Dated on October 16, 2011
BP&CTU-Memo-20111019-01 Received on October 19, 2011

Saudi Aramco would like to inform you that the submitted Asphalt Mix Design for Al-Osais has been approved by Inspection Department to be utilized for the asphalt reinstatement work for the above subject project. Saudi Aramco inspectors will be heavily involved to ensure quality of the asphaltting work.

SDCC has to provide/meet the below requirements in order to insure smooth asphaltting work:

- Scope of work.
- Quality Plan.
- Construction drawings/cross section details for all crossing areas.
- Asphalt from approved supplier.
- Copy of the approved Asphalt design mix.
- Approved backfill material.
- All required tests should be performed by an approved 3rd party civil testing lab. See attachment.
- Use of logbook.
- 2-week looking ahead schedule.
- RFI Procedure (48 Hrs in advance notice).
- Backfill material (sub-base) and field compaction shall meet Saudi Aramco specifications.

Should you have any questions, please have your staff call Rabea Manakhah on telephone number 875-9873.


Khalid A. Al-Mulhim,
Superintendent (A)
Dhahran District Cooling Project

RMM
RMM/KAM
cc: UD Manager
Project File

MEMORANDUM

BP & CTU

October 19, 2011

BP&CTU: Tel. 880-1496

Doc. No. BP & CTU-MEMO-20111019-01

Maktoum, Khalid A., Unit Supervisor

DPIU

11th Floor, West Wing

Al Midra Tower

North Park Office complex

Dhahran

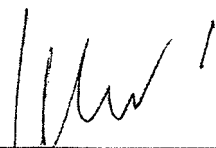
Subject: REVIEW OF ASPHALT MIX DESIGNS

Product/Service Description:	Asphalt Binder Course Class "A" and Wearing Course Class "B & C"
Vendor/ Contractor:	Al Osais/Al Osais Road Maintenance Company
BI/CN:	10-00565/6600023944
Location:	Dhahran
Project/Description:	Dhahran District Cooling
References:	DCN 1149 =SAPMT Transmittal No. CACPD:344/2011
Remarks:	Approved JMF and Tolerances (BBCCA ,BWCCB & BWCCC)

The results are as follows:

- ☒ Submittal is approved
- ☐ Submittal is not approved
- ☐ Submittal is approved with conditions
- ☐ Plant is on Hold
- ☒ See Attachments *

Please initiate the necessary action.

 10/20/2011
R.C. Albarillo, Unit Supervisor
Batch Plants & Civil Testing Unit

*Attachments: (7 pages)

JMM/jmm

cc: PID Letter book
BP & CTU File

10/19/11

Our Review References:

1. DCN 1149= SAPMT Transmittal No. CACPD:344/2011
2. Relevant Saudi Aramco Standards: 09-SAMSS-088/SAEP 1150, SAES-Q-006, 7.5-WI-PID-BP & CTU-01

Processess Performed:

REVIEW OF ASPHALT MIX DESIGN

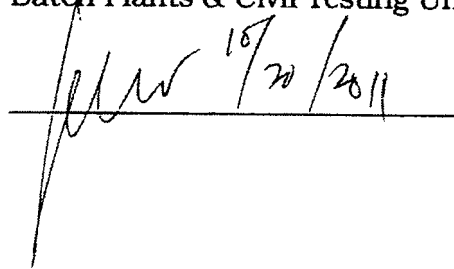
As requested by the responsible SAPMT and DPIU, BP& CTU reviewed the submittal and based on BP&CTU Memo -BP-IM-20111001-02, contractor has rectified all outstanding items and therefore, BP & CTU **recommends approval as noted below;**

Recommendations:

- Vendor shall perform test on frequencies required in SAES-Q-006 Para 5.5.4. For Saudi Aramco acceptance, vendor shall perform test on raw materials utilizing a Saudi Aramco approved civil testing laboratory and submit test reports to BP&CTU every month.
- Contractor is responsible for all activities at the batch plant during asphalt production and supply to construction site.
- Attached are the Approved Job Mix Formula for Asphalt Binder Course Class "A" and Asphalt Wearing Course Class "B & C "and the applicable Job Mix tolerances.

Should you have any query, please contact the undersigned at 880-1496.

R. C. Albarillo, Unit Supervisor
Batch Plants & Civil Testing Unit


18/10/2011

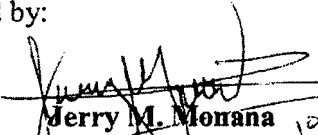
APPROVED ASPHALT MIX DESIGN

Attachment BP&CTU Memo-20111019-01
Supplier: Al-Osais Asphalt Plant-Dhahran
BI/JO Number: BI-10-00565- Dhahran District Cooling
Source of Aggregate:

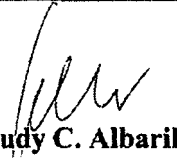
ASPHALT BINDER COURSE CLASS "A"				
Sieve Sizes		JMF	Job Mix Tolerances	SAES-Q-006
1 1/2 inch	37.5 mm	100	94 - 100	100
1 inch	25 mm	83	77 - 89	75-90
3/4 inch	19 mm	77	71 - 80	65-80
1/2 inch	12.5 mm	63	58 - 68	55-70
3/8 inch	9.5 mm	52	47 - 57	45-60
No. 4	4.75 mm	35	31 - 40	31-46
No. 10	2.0 mm	26	22 - 30	18-33
No. 40	425 µm	14	10 - 18	5-18
No. 80	180 µm	10	7 - 13	3-13
No. 200	75 µm	6	4.5 - 7.5	2-9
Bitumen Content (%)		4.9	4.5 - 5.3	4.0-7.0

ASPHALT WEARING COURSE CLASS "B"				
Sieve Sizes		JMF	Job Mix Tolerances	SAES-Q-006
3/4 inch	19 mm	100	100	100
1/2 inch	12.5 mm	87	81 - 93	80-100
No. 4	4.75 mm	54	50 - 59	50-70
No. 10	2.0 mm	41	37 - 45	32-47
No. 40	425 µm	20	16 - 24	16-26
No. 80	180 µm	13	10 - 16	10-18
No. 200	75 µm	7	5.5 - 8.5	4-10
Bitumen Content (%)		5.5	5.1 - 5.9	4-7

Prepared by:


Jerry M. Monana
Batch Plants and Civil Testing Unit

Approved by:


Rudy C. Albarillo
Supervisor, BP & CTU

Projects Inspection Section

Batch Plants & Civil Testing Unit

October 19, 2011

APPROVED ASPHALT MIX DESIGN

Attachment

BP&CTU Memo-20111019-01

Supplier:

Al-Osais Asphalt Plant-Dhahran

BI/JO Number:

BI-10-00565- Dhahran District Cooling

Source of Aggregate:

ASPHALT WEARING COURSE CLASS "C"				
Sieve Sizes		JMF	Job Mix Tolerances	SAES-Q-006
3/4 inch	19 mm	100	100	100
1/2 inch	12.5 mm	87	81 - 93	80-100
No. 4	4.75 mm	54	50 - 59	50-70
No. 10	2.0 mm	41	37 - 45	32-47
No. 40	425 µm	20	16 - 24	16-26
No. 80	180 µm	13	10 - 16	10-18
No. 200	75 µm	7	5.5 - 8.5	4-10
Bitumen Content (%)		5.5	5.1 - 5.9	4-7

Prepared by:


Jerry M. Monana

Batch Plants and Civil Testing Unit

10/19/11

Approved by:


Rudy C. Albarillo

Supervisor, BP & CTU

DCN: 1149

CACPD: 344/2011

BI-10-00565
DHAHRAN DISTRICT COOLING
CONTRACT # 6600023944
Revised Asphalt Mix Designs Package

Albarillo, Rudy C., Supervisor
Batch Plants & Civil Testing Unit,
Inspection Department
R-1171, Floor 11,
Midra Office Complex (Bldg. NP4)
Dhahran

Reference: CACPD: 323/2011 Dated on September 28, 2011
BP-IM-20111004-02 Received on October 9, 2011

Attached herewith is the revised Asphalt Mix Design package submitted by Al-Osais Road Maintenance Company for your approval.

We are looking forward to receiving your approval no later than October 19, 2011 in order to allow our contractor to proceed with the work with no further delay.

Should you have any questions, please have your staff call Rabea Manakhah on telephone number 875-9873.

RMM *[Signature]*
RMM/KAM

cc: UD Manager
Project File

[Signature]
Hussein H Al-Hammad,
Superintendent,
Central A/C Plants Division



Our Review References:

1. DCN 1064 = SAPMT Transmittal No: PID/SAPMT-323/2011 with attached 90 pages Contractor submittal No. SNC-TR-142, Al-Osais quality manual, QC procedure and Safety Manual
2. Saudi Aramco Specifications: 7.5-WI-PID-BP&CTU-01, SAEP 1150 and SAES-Q-006/MOT SPECIFICATIONS, PART 4
3. Relevant International Industry Standards: AASTHO M156 & ASTM D/3740/3666, ISO and 9001:2008

PROCESS PERFORMED:

**EVALUATION OF ASPHALT PLANT AND MIX DESIGN (AL-OSAIS ABP#1,
DHAHRAN/SINOPEC)**

As requested by the responsible SAPMT & APIU (10-00565), we evaluated their submitted documents. Based on the evaluation DPIS/BP & CTU does **not recommend approval**.

The following are our review findings:

ITEMS	DESCRIPTION	FINDINGS	RECOMMENDATIONS
1.	Contractor Plant Survey	Not performed.	The contractor shall perform the QC Initial Plant survey utilizing the attached format and submit to APIU as required by SAEP 1150, Clause 8.171.2. <u>Perform & Resubmit.</u>
2.	Control of QA, QC and Safety personnel at the Asphalt Plant	Copy of Documented QA/QC & Safety organization chart not submitted.	The contractor shall provide a copy of the documented QA, QC & Safety organization chart which reflects the responsibility, line of communication and interface between the SAPMT, Contractor, Asphalt supplier, independent testing laboratory & calibration agency as required by SAES-Q-006/ASTM D3666. <u>Provide & resubmit.</u>
3.	Control on batch plant calibration- List/inventory of Batch plants weighing scale, temperature gauges and QC laboratory testing apparatus	Copy of documented List/Inventory of IMTE not submitted.	The contractor/OSAIS shall provide a copy of the documented List/Inventory of the inspection, measuring and testing equipment of the batch plant internal QC laboratory which specifies the type, serial number & next